

No. 712,802.

Patented Nov. 4, 1902.

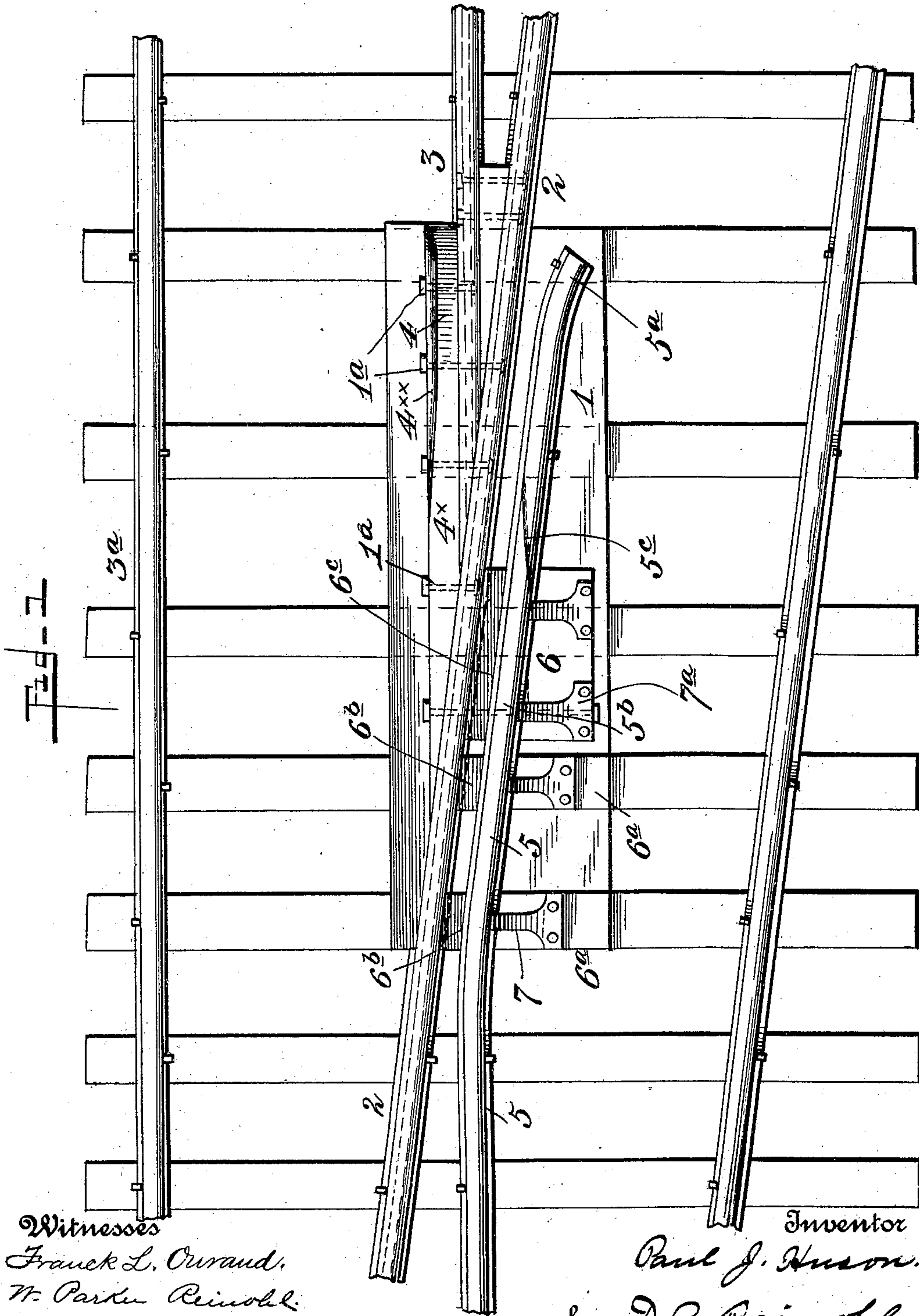
P. J. HUSON.

RAILWAY FROG.

(Application filed Aug. 11, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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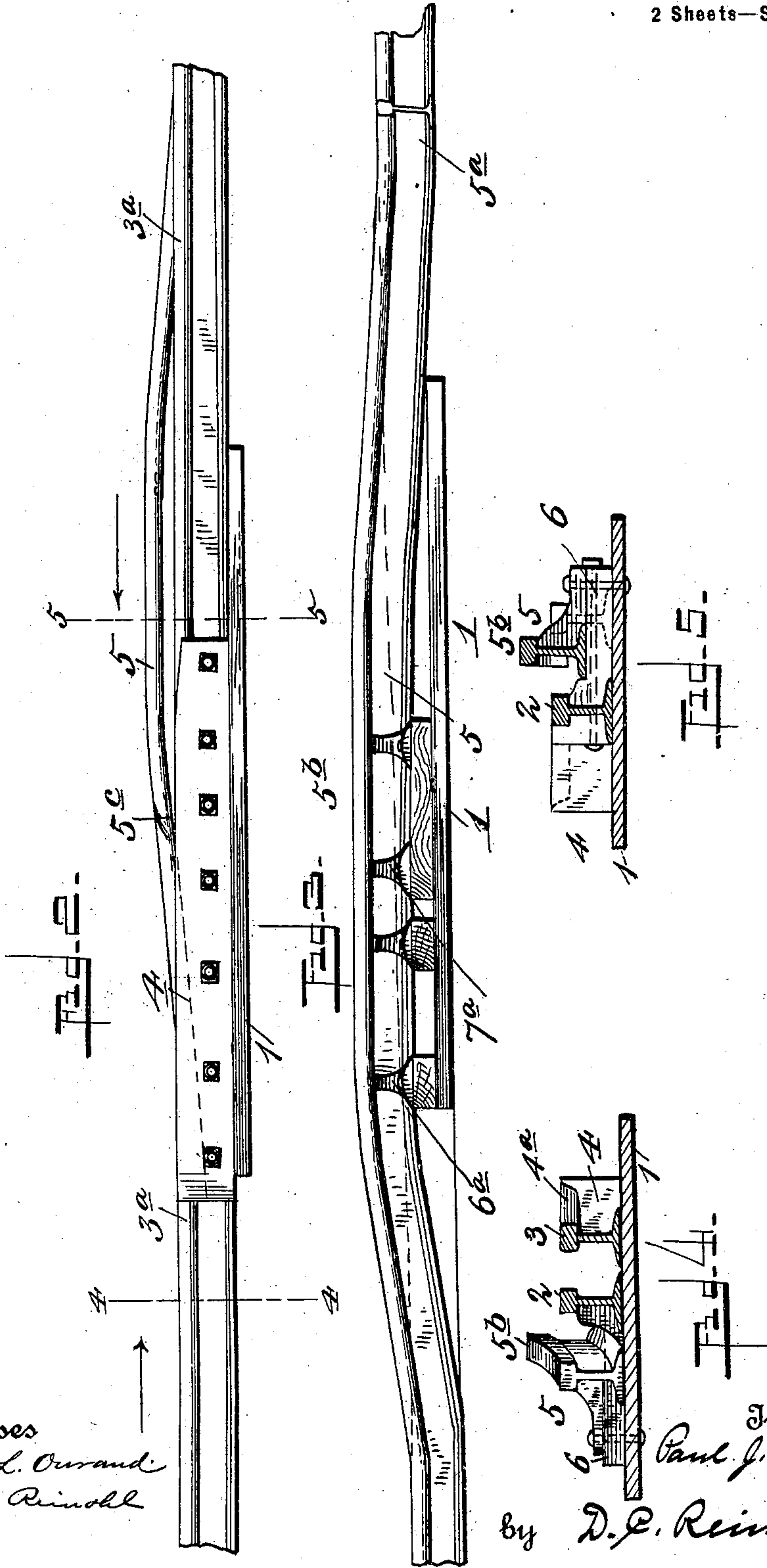
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UNITED STATES PATENT OFFICE.

PAUL J. HUSON, OF COVINGTON, GEORGIA.

RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 712,802, dated November 4, 1902.

Application filed August 11, 1902. Serial No. 119,196. (No model.)

To all whom it may concern:

Be it known that I, PAUL J. HUSON, a citizen of the United States, residing at Covington, in the county of Newton and State of Georgia, have invented certain new and useful Improvements in Railway-Frogs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to railway-frogs; and it consists in certain improvements in construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a top plan view of my improved frog in connection with rails of a track as in use; Fig. 2, a side elevation thereof; Fig. 3, a like view showing the side opposite that shown in Fig. 2; Fig. 4, a vertical transverse section on line 4-4, Fig. 2, looking in the direction of the arrow; and Fig. 5, a like view on line 5-5, Fig. 2, looking in the direction of the arrow, pointing oppositely to the arrow aforesaid.

It is understood that latitude is allowed herein as to details of construction and arrangement of the parts, as they may be changed as circumstances suggest without departing from the spirit of my invention and said invention remain intact and be protected.

In carrying into effect my invention I preferably suitably dispose and secure to the railway-ties at the point of intersection of the crossing main-track rail and siding-rail a base-plate 1. The right-hand main-track rail 2 has bolted thereto at said point a rail-section 3, similar in outline to said rail and touching it convergently or at an acute angle, being parallel with a corresponding rail 3^a, and bolted to both of these is a lateral rail-section or shoe 4, also arranged at a like angle to said main-track rail, the same fastening-bolt 1^a being preferably used to connect all of these parts together. Said shoe or rail-section 4 is arranged upon the side opposite that of the wheel-flange side of the main-track rail and has an upper flat or horizontal surface 4^x, extending a portion of its length and a longitudinal groove 4^a, extending from said flat-surface portion and sloping or slanting downwardly toward the forward or one end of said shoe

or rail-section. Said groove or channel also slopes transversely toward the rail 2, being more precipitate toward the forward end of said shoe to obviously move the wheel-flange toward the rail as the car-wheel passes up said shoe, as is the intention. Said shoe or rail-section also has a longitudinal guard-flange 4^{xx} at the wheel-flange side, with a preferably somewhat rounded or convexed inner surface and vanishing inner forward edge to aid or facilitate the passage of the wheel thereupon and also toward the main-track rail. The flat or horizontal surface portion 4^x of said shoe or rail-section is flush with the adjoining upper or tread surface of said main-track rail and similarly arranged with the plane of the corresponding surface of the rail-section 3. The top or eminence of the inclination of the longitudinal portion of the groove or channel 4^a is about flush or in the same plane with the horizontal surface portion 4^x of the rail-section or shoe 4 and the corresponding surface of the main-track rail 2, permitting as the wheels are elevated or lifted by said shoe the passage of the wheels onto said horizontal surface portions, preliminary to the further elevation of said wheels to enable them to wholly clear the siding-rail, as presently more fully explained. At the left of and properly spaced off from the main-track rail 2 is also a lateral rail-section 5, suitably secured, as later described, preferably upon blocks or supports 6 6^a, bolted or secured to the base-plate 1, the block or support 6 having its upper surface preferably inclined upwardly toward one edge for an obvious purpose, with said edge, however, arranged in a common plane with the corresponding surfaces of the blocks or supports 6^a. Said rail-section constitutes an extension or continuation of the inner or left-hand rail of the track or siding 3 3^a at a point beyond the rail-section 3, as seen in Fig. 1. Said rail extension or section 5 is deflected from the line of the side track and caused to extend parallel with the main-track rail 2 a suitable distance, and again deflected at its terminal, as at 5^a, away from the line of said rail 2 for the ready passage of the wheels of a car traveling along the main track. Said rail extension or section 5 has also its tread or upper surface preferably somewhat rounded in the direc-

tion of its longitudinal plane, and inclined, as at 5^b, so as to stand above the plane of the corresponding surfaces of the main-track rail 2 and the lifting rail-section 4, as seen particularly in Figs. 4 and 5, the maximum altitude of said rounded and inclined surface being in a plane about opposite the rectilinear or horizontal surface 4^x of the tread-surface of the lifting rail-section or shoe 4. Thus as the car-wheels of a passing train have been lifted to the top of the incline of the groove of the tread-surface of the rail-section 4 the treads of said wheels will engage and be lifted by the rounded or "hump-like" surface 5^b of said rail-section 5, and be thus sustained in their elevated position, enable them to clear the main-track rail and to provide for the speedy and uninterrupted passage of the train at that point by the aid of permanent and safe means. The rail section or extension 5 has also in its upper or tread surface at a point about where the treads of the car-wheels engage said surface as said wheels are being lifted or elevated by the rail-section 4 a divergently-inclined surface 5^c to aid the proper passage of the treads of said wheel onto said rail extension. Said rail-section 5 also has its tread or upper surface portions at the termini of its inclinations arranged in about the same or common plane with the corresponding surfaces of the main-track and siding rails, the purpose of which is apparent.

The means above noted for securing the rail extension 5 in position may consist of providing the blocks or supports 6 6^a at one edge with upstanding flanges or offsets 6^b 6^c, respectively, adapted to engage jointly the main-track rail 2 at one side and said rail extension at the opposite side, and of braces or angle-irons 7 7^a, bolted to said blocks or supports and engaging said rail-section at the side opposite to that engaged by the flanges of offsets 6^b 6^c.

Among other advantages possessed by my invention it may be stated that it provides for an unbroken or continuous main track or line, a complete rigid frog, dispensing with additional guard-rails, as heretofore employed in the use of the ordinary frog, and an easy and safe means for crossing over onto the siding. It is also strong, durable, easily maintained, and cheaply constructed.

Having thus fully described my invention, what I claim is—

1. A railway-frog, embracing an elevating lateral rail or shoe provided with a longitudinal groove inclined downwardly and convergently joined to a main-track rail, and a rail arranged upon the opposite side of said main-track rail, adapted to receive the tread of the car-wheel elevated by said lateral rail, and enable said wheel to clear the main-track rail.

2. A railway-frog, embracing a lateral rail or shoe convergently joined to a main-track rail, and having a longitudinal groove downwardly inclined at its forward end, and a rail

arranged upon the opposite side of said main-track rail, adapted to receive the tread of the car-wheel elevated by said lateral rail.

3. A railway-frog, embracing an elevating lateral rail or shoe having a horizontal tread-surface extending a portion of its length, and a longitudinal groove downwardly inclined and forming a tread-surface extending the rest of its length, and a rail arranged upon the opposite side of said main-track rail, adapted to receive the tread of the wheel being elevated by said lateral rail.

4. A railway-frog, embracing an elevating lateral rail or shoe provided with a longitudinal groove, and a horizontal tread-surface, and convergently joined to a main-track rail, and a rail arranged upon the opposite side of said main-track rail provided with a laterally-inclined surface and having its upper or tread surface, intermediately of its ends, standing in a plane above the corresponding surface of said main-track rail.

5. A railway-frog, embracing an elevating lateral rail or shoe provided with a longitudinal groove inclined downwardly and transversely, and a horizontal tread-surface, and convergently joined to a main-track rail, and a rail arranged upon the opposite side of said main-track rail, with its end portions about flush with the plane of the upper surface of the main-track rail and its intermediate upper surface standing above the plane of the corresponding surface of said main-track rail.

6. A railway-frog, embracing an elevating lateral rail or shoe provided with a longitudinal groove inclined downwardly, a guard-flange on one side thereof, and convergently joined to a main-track rail, and a rail arranged upon the opposite side of said main-track rail, with its end portions arranged about flush with the plane of the upper surface of said main-track rail and its intermediate upper surface rounded in its longitudinal plane and standing above said upper-surface plane of said main-track rail and inclined toward said end portions.

7. A railway-frog, embracing a lateral lifting-rail or shoe provided with a longitudinal groove inclined downwardly and transversely, a guard-flange on one side thereof, and convergently joined to a main-track rail, and a rail arranged upon the opposite side of said main-track rail, with its end portions arranged about flush with the plane of the upper surface of said main-track rail, and its intermediate upper surface standing above said upper-surface plane of the main-track rail, and having a divergently-inclined surface thereon at a point about where the wheel lifted by said lateral rail, engages said intermediate upper rail-surface.

8. A railway-frog, embracing a lateral lifting-rail or shoe provided with a longitudinal groove inclined downwardly, and a horizontal tread-surface, and convergently joined to a main-track rail, and a rail arranged upon the opposite side of said main-track rail, with

its end portions arranged about flush with the plane of the upper surface of said main-track rail, and its intermediate upper surface standing above said upper-surface plane
5 of the main-track rail, said latter side rail also forming a continuation or extension of a siding track - rail, and having its greater length deflected from the line thereof and extending parallel with a main-track rail and

again deflected, said latter deflection being to away from the line of the main track.

In testimony whereof I affix my signature in presence of two witnesses.

PAUL J. HUSON.

Witnesses:

JOHN F. LUNSFORD,
THOMAS HOLLIS.